

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Art Unit 3729

Examiner: C. Arbes

Applicant:

Jack L. Hoffa

Serial No.:

Filed:

For:

WIRE AND CABLE CUTTING  
AND STRIPPING USING  
ADJACENT BLADES

-----  
Pasadena, California  
January 25, 2000

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

PARENT  
APPLN

Sir:

Please amend the inventorship as to claim 45,  
by deletion of the currently named inventor Greg  
Nazerian, and charge the fee required under 37 CFR  
1.17(i) to Account 08-0118.

Serial No. 09/320,096

R E M A R K S

The above amendment of inventorship is made pursuant to determination that the above deleted inventor is not an inventor of claim 45 on file in this case. The required fee payment is charged to Account No. 08-0118.

Allowance is urged.

Respectfully submitted,



William W. Haefliger  
Attorney for Applicant  
Registration No. 17,120  
(323) 684-2707

WWH:ts

Docket 11,981- 1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Divisional Application  
Under 27 CFR 160  
Pending Application of

Jack L. Hoffa  
Serial No. 09/320,096  
Filed: May 26, 1999

WIRE AND CABLE CUTTING AND  
STRIPPING APPARATUS USING  
ADJACENT BLADES

Art Unit 3729

Pasadena, California  
January 25, 2000

AMENDMENT ACCOMPANYING REQUEST FOR  
FILING DIVISIONAL APPLICATION  
UNDER 37 CFR 1.60 FILED HEREWITH

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Please amend the divisional application as  
established under 37 CFR 1.60 as follows:

In the Claims:

Please file claim 45. Only claim 45 is to be  
filed and examined, all other claims being canceled.

45. Apparatus for processing wire having a

sheathing to sever the wire into sections and to cut the sheathing and strip it from the sections adjacent to their severed ends, comprising,

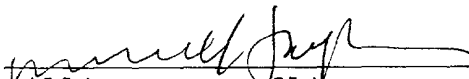
- a) a support structure;
- b) first and second pairs of endless belt conveyors mounted on said structure and axially spaced from each other;
- c) said belt conveyors in each pair comprising endless belts having parallel portions which grip opposite sides of the wire;
- d) at least one electrical conveyor drive motor connected to one of said belt conveyors in each pair selectively energizable to drive the associated belt conveyor in at least one direction;
- e) two or more blades movably supported by said structure for movement between one or more open positions in which the blades are separated from the wire and sheathing, a wire severing position in which at least two of said blades sever the wire, and a sheathing cutting position in which at least two of said blades cut the sheathing but not the wire;
- f) at least one blade actuator connected to said blades and selectively energizable to relatively move said blades between their open, wire severing, and sheathing cutting positions; and

g) an electrical controller connected to said at least one conveyor drive motor and to said at least one blade actuator to operate them in a controlled sequence to sever the wire into sections, cut the sheathing, and strip the sheathing from the sections adjacent to their severed ends.

R E M A R K S

Allowance is urged.

Respectfully submitted,

  
William W. Haefliger  
Attorney for Applicant  
Registration No. 17,120  
323 684-2707

WWH:ts

Docket 11,981-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Art Unit \_\_\_\_\_

Examiner: \_\_\_\_\_

Applicant:

Jack L. Hoffa

Serial No.:

Filed:

For:

WIRE AND CABLE CUTTING  
AND STRIPPING USING  
ADJACENT BLADES

-----  
Pasadena, California  
January 25, 2000

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Transmitted herewith is a true copy of parent application Serial No. 09/320,096 filed May 26, 1999, entitled "WIRE AND CABLE CUTTING AND STRIPPING USING ADJACENT BLADES".

Respectfully submitted,



William W. Haeffliger  
Attorney for Applicant  
Registration No. 17,210  
(323) 684-2707

CERTIFICATE

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
William W. Haefliger

WWH:ts

Docket 11,981-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Continuation Application  
Under 27 CFR 160  
Pending Application of

Jack L. Hoffa et al.  
Serial No. 08/845,065  
Filed: April 21, 1997

WIRE AND CABLE CUTTING AND  
STRIPPING APPARATUS USING  
ADJACENT BLADES

Art Unit 3726

Pasadena, California  
May 25, 1999

AMENDMENT ACCOMPANYING REQUEST FOR  
FILING CONTINUATION APPLICATION  
UNDER 37 CFR 1.60 FILED HEREWITH

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Please amend the continuation application as  
established under 37 CFR 1.60 as follows:

In the Claims:

Please add claims 45, 46, 47, 48, 49, 50, 51,  
52 and 53. Only those claims 45-53 are to be filed and  
examined, all other claims being canceled.



45. Apparatus for processing wire having a sheathing to sever the wire into sections and to cut the sheathing and strip it from the sections adjacent to their severed ends, comprising,

- a) a support structure;
- b) first and second pairs of endless belt conveyors mounted on said structure and axially spaced from each other;
- c) said belt conveyors in each pair comprising endless belts having parallel portions which grip opposite sides of the wire;
- d) at least one electrical conveyor drive motor connected to one of said belt conveyors in each pair selectively energizable to drive the associated belt conveyor in at least one direction;
- e) two or more blades movably supported by said structure for movement between one or more open positions in which the blades are separated from the wire and sheathing, a wire severing position in which at least two of said blades sever the wire, and a sheathing cutting position in which at least two of said blades cut the sheathing but not the wire;
- f) at least one blade actuator connected to said blades and selectively energizable to relatively move said blades between their open, wire severing, and

sheathing cutting positions; and

g) an electrical controller connected to said at least one conveyor drive motor and to said at least one blade actuator to operate them in a controlled sequence to sever the wire into sections, cut the sheathing, and strip the sheathing from the sections adjacent to their severed ends.

46. A method of processing wire having a sheathing to sever the wire thereby to form severed wire ends and to remove sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating the endless belt conveyor pairs to position the wire for at least two of said blades to sever the wire;

b) actuating at least two of said blades to sever the wire;

c) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to position the two severed wire ends axially, at least one end at a time, for at least two of said blades to cut the sheathing on the two severed wire ends, at least one end at a time;

d) actuating at least two of said blades to cut the sheathing on the two severed wire ends, at least one end at a time; and

e) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to move the two severed wire ends axially, at least one end at a time, so that the blades that cut the sheathing strip the cut sheathing from each severed wire end, at least one end at a time.

10044657-010002

47. A method of displacing wire having a sheathing to position the wire for the wire to be severed, thereby to form severed wire ends, to position the severed wire ends for the sheathing on each severed wire end to be cut, and to move the severed wire ends to remove the cut sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating at least one motor to drive at least one pair of said conveyors to position the wire for at least two of said blades to sever the wire;

b) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to position the two severed wire ends axially, at least one end at a time, for at least two of said

blades to cut the sheathing on the two severed wire ends, at least one end at a time; and

c) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to move the two severed wire ends axially, at least one end at a time, so that at least two of said blades strip the cut sheathing from each severed wire end, at least one end at a time.

48. A method of severing wire having a sheathing into sections of predetermined wire length with each severed wire section having a severed wire end, and removing a predetermined strip length of sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors, a forward endless belt conveyor pair and a rearward endless belt conveyor pair, gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, at least one of the endless belt conveyor pairs being positioned to feed the wire in a forward direction from

a wire supply source, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating at least one conveyor motor to drive at least one of the endless belt conveyor pairs to feed the wire from the wire supply source in a forward direction through one of the endless belt conveyor pairs, the blade assembly, and into the other endless belt conveyor pair until the distance from the blades to the free end of the wire equals the predetermined wire length;

b) actuating at least two of said blades to sever the wire to thereby create two wire sections including a forward severed wire section and a rearward severed wire section;

c) relatively retracting the blades after they sever the wire;

d) operating one of said endless belt conveyor pairs to move one of said severed wire sections axially so that the distance from the blades to the severed end of said one of said severed wire sections equals the predetermined sheathing strip

length;

e) actuating at least two of said blades to cut the sheathing on the severed end of said one of said severed wire sections;

f) operating said one of said endless belt conveyor pairs to move said one of said severed wire sections so as to pull the severed end of said one of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said one of said severed wire sections;

g) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said one of said severed wire sections;

h) operating the other of said endless belt conveyor pairs to move the other of said severed wire sections axially so that the distance from the blades to the severed end of said other of said severed wire sections equals the predetermined sheathing strip length;

i) actuating at least two of said blades to cut the sheathing on the severed end of said other of said severed wire sections;

j) operating said other of said endless belt conveyor pairs to move said other of said severed

wire sections so as to pull the severed end of said other of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said other of said severed wire sections;

k) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said other of said severed wire sections; and

l) operating the forward endless belt conveyor pair in a forward direction to expel the forward severed wire section.

49. A method of severing wire having a sheathing into sections of predetermined wire length with each severed wire section having a severed wire end, and removing sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors, a forward endless belt conveyor pair and a rearward endless belt conveyor pair, gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, at least one of the endless belt conveyor pairs being



positioned to feed the wire in a forward direction from a wire supply source, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating at least one conveyor motor to drive at least one of the endless belt conveyor pairs to feed the wire from the wire supply source in a forward direction through one of the endless belt conveyor pairs, the blade assembly, and into the other endless belt conveyor pair until the distance from the blades to the free end of the wire equals the predetermined wire length;

b) actuating at least two of said blades to sever the wire to thereby create two wire sections including a forward severed wire section and a rearward severed wire section;

c) relatively retracting the blades after they sever the wire;

d) operating one of said endless belt conveyor pairs to move one of said severed wire sections axially into position for at least two of said blades to cut the sheathing on its severed end;

e) actuating at least two of said blades to cut the sheathing on the severed end of said one of said severed wire sections;

f) operating said one of said endless belt conveyor pairs to move said one of said severed wire sections so as to pull the severed end of said one of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said one of said severed wire sections;

g) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said one of said severed wire sections;

h) operating the other of said endless belt conveyor pairs to move the other of said severed wire sections axially into position for at least two of said blades to cut the sheathing on its severed end;

i) actuating at least two of said blades to cut the sheathing on the severed end of said other of said severed wire sections;

j) operating said other of said endless belt conveyor pairs to move said other of said severed wire sections so as to pull the severed end of said other of said severed wire sections between at least two of said blades so that the blades strip the cut

sheathing from the severed end of said other of said severed wire sections;

k) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said other of said severed wire sections; and

l) operating the forward endless belt conveyor pair in a forward direction to expel the forward severed wire section.

50. A method of severing wire having a sheathing into sections of predetermined wire length with each severed wire section having a severed wire end, and removing a predetermined strip length of sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors, a forward endless belt conveyor pair and a rearward endless belt conveyor pair, gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, at least one of the endless belt conveyor pairs being positioned to feed the wire in a forward direction from

a wire supply source, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating at least one conveyor motor to drive at least one of the conveyor pairs to feed the wire from the wire supply source in a forward direction through one of the endless belt conveyor pairs, the blade assembly, and into the other endless belt conveyor pair until the distance from the blades to the free end of the wire equals the predetermined wire length;

b) actuating at least two of said blades to sever the wire to thereby create two wire sections including a forward severed wire section and a rearward severed wire section;

c) relatively retracting said at least two of the blades after they sever the wire;

d) operating at least one motor to drive one of said endless belt conveyor pairs to move one of said severed wire sections axially;

e) actuating at least two of said blades to cut the sheathing on the severed end of said one of

said severed wire sections that has been moved axially, thereby to establish a distance from the blades cutting the sheathing to the severed end of said one of said severed wire sections whereby said distance equals the predetermined sheathing strip length;

f) operating at least one motor to drive said one of said endless belt conveyor pairs to move said one of said severed wire sections so as to pull the severed end of said one of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said one of said severed wire sections;

g) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said one of said severed wire sections;

h) operating at least one motor to drive the other of said endless belt conveyor pairs to move the other of said severed sections axially;

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i) actuating at least two of said blades to cut the sheathing on the severed end of said other of said severed wire sections that has been moved axially, thereby to establish a distance from the blades cutting the sheathing to the severed end of said other of said severed wire sections whereby said distance equals the predetermined sheathing strip length;

j) operating at least one motor to drive said other of said endless belt conveyor pairs to move said other of said severed wire sections so as to pull the severed end of said other of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said other of said severed wire sections;

k) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said other of said severed wire sections; and

l) operating the forward endless belt conveyor pair in a forward direction to expel the forward severed wire section.

51. The method of claim 48 including also removing a predetermined length of sheathing from the end of each section opposite said severed end thereof.

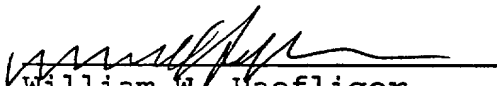
52. The method of claim 49 including also removing sheathing from the end of each section opposite said severed end thereof.

53. The method of claim 50 including also removing a predetermined length of sheathing from the end of each section opposite said severed end thereof.

R E M A R K S

Allowance is urged.

Respectfully submitted,

  
William W. Haefliger  
Attorney for Applicant  
Registration No. 17,120  
323 684-2707

WWH:ts

Docket 11,981

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Art Unit \_\_\_\_\_

Examiner: \_\_\_\_\_

Applicant:

Jack L. Hoffa et al.

Serial No.:

Filed:

For:

WIRE AND CABLE CUTTING  
AND STRIPPING USING  
ADJACENT BLADES

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Pasadena, California  
May 19, 1999

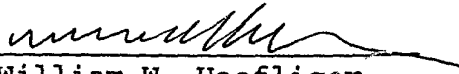
Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Transmitted herewith is a true copy of parent application Serial No. 08/845,065 filed April 21, 1997, entitled "WIRE AND CABLE CUTTING AND STRIPPING USING ADJACENT BLADES".

Respectfully submitted,

  
William W. Haeffliger  
Attorney for Applicant  
Registration No. 17,210  
(323) 684-2707



CERTIFICATE

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
William W. Haefliger

WWH:ts

Docket 11,981

10044657-010806

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Continuation Application  
Under 37 CFR 1.60  
Pending Application of

Jack L. Hoffa et al.  
Serial No. 08/353,352 (Parent)  
Filed 12/2/94

For: WIRE AND CABLE CUTTING  
AND STRIPPING USING  
ADJACENT BLADES

Art Unit 3206

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Pasadena, California  
April 16, 1997

AMENDMENT ACCOMPANYING REQUEST FOR  
FILING CONTINUATION APPLICATION  
UNDER 37 CFR 1.60 FILED HERewith

The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Please amend the continuation application as  
established under 37 CFR 1.60:

In the Claims:

Please cancel claims 1 through 20 (as filed in the parent application) and restate, i.e., substitute the following claims in this continuation application:

21. In apparatus for processing wire to cut the wire into sections and to expose section wire ends, the wire having an inner core and sheathing about said core, the apparatus including a wire displacer for displacing the wire for processing, the combination comprising:

a) multiple blade structures, including at least two of said structures that move adjacent one another as said two structures move relatively oppositely toward and away from said wire in directions generally normal to said wire,

b) each of said two blade structures comprising at least two sections having cutting edges,

c) said cutting edges configured such that, when the two said blade structures are moved relatively longitudinally in a primary mode, two of said cutting edges cut in opposite directions through the wire, said two cutting edges being first and second cutting edges,

and when said two structures are moved relatively longitudinally in a second mode, the remaining two of said cutting edges cut in opposite directions into the wire sheathing to enable stripping of the sheathing off the wire, said remaining two cutting edges being third and fourth cutting edges, said first and third cutting edges being on one of said blade structures, and said second and fourth cutting edges being on the other of said blade structures,

d) and an actuator operatively connected to said blade structures for moving said blade structures adjacent one another as said two blade structures move relatively oppositely toward and away from said wire, as defined.

22. The combination of claim 21 wherein at least one of said two blade structures defines first shoulders elongated longitudinally and forming a space between which the other of said two blade structures extends during said relative movement.

23. The combination of claim 22 wherein said first shoulders are laterally spaced apart and face one another, and said other of said two blade structures has second shoulders also elongated longitudinally and extending in proximity with said first shoulders during said relative movement.

24. The combination of claim 21 including programming means operatively associated with said actuator to provide programmable strip depth of said sheathing.

25. The combination of claim 23 wherein said other blade structure includes a blade and a blade holder carrying said blade, said holder forming said second shoulders.

26. The combination of claim 21 wherein each of said blade structures extends at opposite sides of said wire.

27. The combination of claim 21 wherein said blade structures include blade plates having said cutting edges, said blade plates extending in close, parallel, overlapping relation during said relative movement.

28. The combination of claim 27 wherein said cutting edges on two of said overlapping plates provide V-shaped edge portions that overlap when the blade plates are moved in said second mode during said relative movement.

29. The combination of claim 23 wherein said first and second shoulders extend in endwise alignment with one another during said relative movement.

30. The combination of claim 23 wherein said first and second shoulders extend in laterally overlapping relation during said relative movement.

31. The combination of claim 21 including support structure for said blade structures for holding the blade structures in fixed positions on the support structure, each blade structure comprising two discrete blade plates, one plate carrying one V-shaped cutting edge and the other plate carrying another V-shaped cutting edge.

32. The combination of claim 31 including loading mechanism for loading at least one blade structure into said support structure, said loading mechanism positioned adjacent said support structure for said blade structures.

33. The combination of claim 31 including holders carried by the support structure for holding the blade structures attached in fixed positions on the support structure, and to allow release of the blade structures from the support structure, enabling their replacement.

34. In apparatus for processing wire, the combination comprising:

a) two blade structures, each of said two blade structures comprising at least two sections having first and second cutting edges on one said structure and third and fourth cutting edges on another said structure,

b) at least one drive,

c) and other mechanism operatively connected between said drive, and said blade structures, and responsive to operation of the drive, for causing one blade structure to be relatively displaced in direction A toward the wire as the other blade structure is relatively displaced in direction -A, to process the wire by cutting of the first and third edges into the wire, and subsequently to cause said one blade structure to be relatively displaced in direction -A, as said other blade structure is relatively displaced in direction A, to process the wire by cutting of the second and fourth edges into the wire.



35. The combination of claim 34 wherein each said blade structure includes two blades on separable sections of the blade structure.

36. The combination of claim 35 wherein said two blades respectively face in directions A and -A.

37. The combination of claim 34 wherein at least one of said edges is a generally V-shaped cutting edge.

38. In the method of processing wire, the steps that include

a) providing two blade structures, said structures provided to comprise at least two sections having first and second cutting edges on one said structure, and third and fourth cutting edges on another said structure,

b) providing at least one drive operatively connected to the blade structures,

c) and operating said drive to cause one

blade structure to be relatively displaced in direction A toward said wire as the other blade structure is relatively displaced in direction -A, to process the wire by cutting of the first and third edges into the wire, and subsequently to cause said one blade structure to be relatively displaced in direction -A, as said other blade structure is relatively displaced in direction A, to process the wire by cutting of the second and fourth edges into the wire.

39. The combination of claim 21 wherein the cutting edges on one structure have different configurations, and the cutting edges on the other structure have different configurations, the first cutting edge on the first structure having substantially the same configuration as the second cutting edge on the second structure, and the third cutting edge on the first structure having substantially the same configuration as the fourth cutting edge on the second structure.

40. The combination of claim 39 wherein the first cutting edge on the first structure has C-shape  $C_1$  and the third cutting edge on the first structure has C-shape  $C_2$ , and where  $C_1$  is larger in size than  $C_2$ .

41. In apparatus for processing wire, the combination comprising:

a) two blade structures, each of said two blade structures comprising at least two sections having two cutting edges,

b) at least one drive,

d) and said blade structures operatively coupled to the drive, and responsive to operation of the drive, for causing one blade structure to be relatively displaced in direction A toward said wire as the other blade structure is relatively displaced in direction -A, to process the wire by cutting of certain of said edges on said structures into the wire, and subsequently to cause said one blade structure to be relatively displaced in direction -A, as said other blade structure is relatively displaced in direction A, to process the wire by cutting of others of said edges into the wire.

Please add the following claims:

42. In apparatus for processing wire to cut the wire into sections and to expose section wire ends, the wire having an inner core and sheathing about said core, the apparatus including a wire displacer for displacing the wire for processing, the combination comprising:

a) multiple blade pairs, including at least two of said pairs that move adjacent one another as said two pairs move relatively oppositely toward and away from said wire in directions generally normal to said wire,

b) each of said two blade pairs comprising two blades having cutting edges,

c) said cutting edges configured such that, when the two said blade pairs are moved relatively longitudinally in a primary mode, two of said cutting edges cut in opposite directions through the wire, said two cutting edges being first and second cutting edges, and when said two pairs are moved relatively longitudinally in a second mode, the remaining two of said cutting edges cut in opposite directions into the wire sheathing to enable stripping of the sheathing off

the wire, said remaining two cutting edges being third and fourth cutting edges, said first and third cutting edges being on blades comprising one of said blade pairs, and said second and fourth cutting edges being on blades comprising the other of said blade pairs,

d) and an actuator operatively connected to said blade pairs for moving said blade pairs adjacent one another as said two blade pairs move relatively oppositely toward and away from said wire, as defined.

43. The combination of claim 39 wherein the first cutting edge on the first structure has a V-shape, and the third cutting edge on the first structure has a C-shape.

44. In apparatus for processing wire, the combination comprising:

a) at least two blade pairs including blades at opposite sides of the wire,

b) at least one drive operatively connected to said blades,


c) and other mechanism operatively

connected between said drive and said blades, and responsive to operation of the drive for causing at least a first blade at one side of said wire to be displaced toward said wire as another blade at the opposite side of said wire is displaced away from said wire.

R E M A R K S

Allowance is urged.

Respectfully submitted,

  
William W. Haeffliger  
Attorney for Applicant  
Registration No. 17,120  
Area Code 213 684-2707

WWH:mm

Docket 11,622

L

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Art Unit

Examiner:

Applicant:

Jack L. Hoffa et al.

Serial No.:

Filed:

For:

WIRE AND CABLE CUTTING  
AND STRIPPING USING  
ADJACENT BLADES

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Pasadena, California  
April 16, 1997

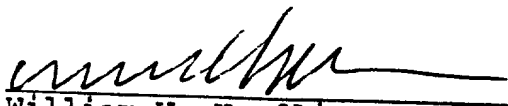
The Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

Transmitted herewith is a true copy of parent  
application Serial No. 08/353,352 filed 12/2/94  
entitled WIRE AND CABLE CUTTING AND STRIPPING USING  
ADJACENT BLADES.

Respectfully submitted,

  
\_\_\_\_\_  
William W. Haefliger  
Attorney for Applicant  
Registration No. 17,120  
Area Code 213 684-2707

WWH:mm

Docket 11,622



CERTIFICATE

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

  
\_\_\_\_\_  
William W. Haefliger

Docket 11,622

FOR UTILITY/DESIGN  
CIP: PLANT  
ORIGINAL/SUBSTITUTE  
DECLARATIONS

RULE 63 (37 C.F.R. 1.63)

Docket 11,228

DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

WIRE AND CABLE CUTTING AND STRIPPING USING ADJACENT BLADES

the specification of which (CHECK applicable BOX(ES))

☒ is attached hereto.

☐ was filed on ..... as U.S. Application No. 0.....

☐ was filed as PCT international Application No. PCT/..... on .....

and (if applicable to U.S. or PCT application) was amended on .....

I hereby state that I have reviewed and understand the contents of the above identified specification, including claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. 1.56(a). I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate filed by me or my assignor disclosing the subject matter claimed in this application and having a filing date (1) before that of the application on which priority is claimed, or (2) if no priority claimed, before the filing date of this application.

PRIOR FOREIGN APPLICATION(S)

Number

Country

Day/MONTH/Year Filed

Priority Claimed

Yes

No

I hereby claim the benefit under 35 U.S.C. 119/365 of all United States applications listed below and PCT international applications listed above or below and, insofar as the subject matter of each of the claims of this application is not disclosed in such prior applications in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. 1.56(a) which occurred between the filing date of each such prior application and the national or PCT international filing date of this application.

PRIOR U.S. OR PCT APPLICATION(S)

Application No. (series code/serial no.)

Day/MONTH/Year Filed

Status

pending, abandoned, patented

(SEE ATTACHED SHEET.)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And I hereby appoint

individually and collectively my attorney, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent, and I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/agency/firm/organization who/which first sends/ses this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct in writing to the contrary.

(to whom all communications are to be directed)

\*William W. Haefliger, 201 S.Lake Ave., Suite 512, Pasadena, Calif. 91101,  
Telephone number 213 684-2707 & 818 449-0467, Registration No.17,120.

1) INVENTOR'S SIGNATURE

Inventor's Name (typed) Jack L. Hoffa

First

Middle Initial

Family Name

Date November 30, 1994

U.S.A.

Country of Citizenship

Residence (City) Brea

(State/Foreign Country)

California

Post Office Address (Include Zip Code) 512 Juniper Street, Brea, CA 92621

2) INVENTOR'S SIGNATURE

Inventor's Name (typed) Greg Nazerian

First

Middle Initial

Family Name

Date November 30, 1994

U.S.A.

Country of Citizenship

Residence (City) Pasadena

(State/Foreign Country)

California

Post Office Address (Include Zip Code) 1534 East Topeka Street, Pasadena, CA 91104

3) INVENTOR'S SIGNATURE

Inventor's Name (typed)

First

Middle Initial

Family Name

Date

Country of Citizenship

Residence (City)

(State/Foreign Country)

Post Office Address (Include Zip Code)

4) INVENTOR'S SIGNATURE

Inventor's Name (typed)

First

Middle Initial

Family Name

Date

Country of Citizenship

Residence (City)

(State/Foreign Country)

Post Office Address (Include Zip Code)

FOR ADDITIONAL INVENTORS, check box ☐ and attach sheet  
name, date, citizenship, residence and address.

for same information for each re signature,

(over)

## Application No. (series code/serial no.)

Day/MONTH/Year Filed

Some  
pending abandoned patented

pending  
patented  
patented  
patented

**AND**

8 November 1993  
25 February 1993  
26 March 1992  
22 February 1991  
9 November 1990

pending  
pending  
patented  
patented  
patented

[illegible]

Applicant or Patent

Jack L. Hoffa &amp; Greg Nazerian

Attorney's

Serial or Patent No.

Docket No.: 11,228

Filed or Issued:

For: WIRE AND CABLE CUTTING AND STRIPPING USING ADJACENT BLADES

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

- ☐ the owner of the small business concern identified below:  
☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN Eubanks Engineering Company  
ADDRESS OF CONCERN 950 East Royal Oaks  
Monrovia, CA 91016

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled WIRE AND CABLE CUTTING AND STRIPPING USING ADJACENT BLADES by inventor(s) Jack L. Hoffa & Greg Nazerian described in

- ☒ the specification filed herewith  
☐ application serial no. \_\_\_\_\_, filed \_\_\_\_\_  
☐ patent no. \_\_\_\_\_, issued \_\_\_\_\_

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). \*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING David C. EubanksTITLE OF PERSON OTHER THAN OWNER PresidentADDRESS OF PERSON SIGNING 950 East Royal Oaks  
Monrovia, CA 91016SIGNATURE David C. EubanksDATE 11/30/94

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Continuation Application  
Under 27 CFR 160  
Pending Application of

Jack L. Hoffa  
Serial No. 09/494,461  
Filed: January 31, 2000

WIRE AND CABLE CUTTING AND STRIPPING      Art Unit 3729  
APPARATUS USING ENDLESS BELT CONVEYORS

-----  
Pasadena, California  
January 8, 2002

**AMENDMENT ACCOMPANYING REQUEST FOR  
FILING CONTINUATION APPLICATION  
UNDER 37 CFR 1.60 FILED HEREWITH**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please amend the continuation application as  
established under 37 CFR 1.60 as follows:

In the Claims:

Please file claims 46-61. Only those claims  
46-61 are to be filed.

46. In apparatus for processing wire, the combination comprising:

a) conveyors for displacing the wire endwise, said conveyors including first upper and lower endless conveyors engageable with opposite sides of the wire,

b) and wherein the conveyors include second upper and lower endless conveyors engageable with opposite sides of the wire, and spaced from said first upper and lower conveyors in the direction of wire displacement, and wire cutting blades located between said first conveyors and said second conveyors,

c) and wherein said conveyors include endless belts having stretches extending in the direction of the wire displacement at opposite sides of the wire.

47. In apparatus, as defined in claim 46, the combination comprising:

d) first upper and lower assemblies for carrying and controllably driving said first conveyors,

e) there being at least one timing belt operatively connected with at least one of said assemblies to effectively transmit rotary drive to said first conveyors via said at least one assembly,

f) said at least one assembly including at least one driven timing pulley on which said at least one timing belt is entrained,

g) there being at least one drive motor, at least one driving timing pulley operatively connected with said at least one drive motor to be driven thereby, and said at least one timing belt being entrained on said at least one driving timing pulley.

48. In apparatus, as defined in claim 46, the combination comprising:

d) first upper and lower assemblies for carrying and controllably driving said first conveyors.

49. In apparatus, as defined in claim 46 the combination comprising:

d) first upper and lower assemblies for carrying and controllably driving said first upper and lower endless conveyors,

e) there being at least one first drive motor operatively connected with at least one of said first assemblies to drive said first upper and lower endless conveyors,

f) there being second upper and lower assemblies for carrying and controllably driving said second upper and lower endless conveyors,

g) there being at least one second drive motor operatively connected with at least one of said second assemblies to drive said second upper and lower endless conveyors.

50. In apparatus, as defined in claim 46, the combination comprising:

d) first upper and lower assemblies for carrying and controllably driving said first upper and lower endless conveyors,

e) there being at least one timing belt operatively connected with at least one first assembly to effectively transmit rotary drive to said first conveyors via said at least one first assembly,

f) said at least one first assembly including at least one driven timing pulley on which said at least one timing belt is entrained,

g) there being at least one first drive motor, at least one driving timing pulley operatively connected with said at least one first drive motor to be driven thereby, and said at least one timing belt



being entrained on said at least one driving timing pulley,

h) and there being second upper and lower assemblies for carrying and controllably driving said second upper and lower endless conveyors.

51. In apparatus, as defined in claim 46, the combination comprising:

d) first upper and lower assemblies for carrying and controllably driving said first upper and lower endless conveyors,

e) and there being a frame including a guide on which at least one of said assemblies is supported and guided for relative movement toward and away from the other assembly.

52. In apparatus, as defined in claim 46, the combination comprising:

d) first upper and lower assemblies for carrying and controllably driving said first upper and lower endless conveyors,

e) and there being second upper and lower assemblies for carrying and controllably driving said

second upper and lower endless conveyors.

53. In apparatus, as defined in claim 46,  
the combination comprising:

d) first upper and lower assemblies for  
carrying and controllably driving said first upper and  
lower endless conveyors,

e) a frame including at least one guide  
supporting at least one of said first assemblies for  
guided movement toward and away from the other  
assembly,

f) there being second upper and lower  
assemblies for carrying and controllably driving said  
second upper and lower endless conveyors.

54. In apparatus, as defined in claim 46,  
the combination comprising:

d) first upper and lower assemblies for  
carrying and controllably driving said first upper and  
lower endless conveyors,

e) there being a frame including at least  
one guide supporting at least one of said first  
assemblies for guided movement toward and away from the

other assembly,

f) there being a force exarter for exerting yieldable force to urge at least one of said first conveyors toward the other and toward the wire,

g) there being second upper and lower assemblies for carrying and controllably driving said second upper and lower endless conveyors.

55. In apparatus, as defined in claim 46, the combination comprising:

d) upper and lower assemblies for carrying and controllably driving said upper and lower endless conveyors.

56. A method of processing wire having a sheathing to sever the wire thereby to form severed wire ends and to remove sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately drivable in the forward and rearward

directions by at least one reversible conveyor drive motor, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, at least one actuator connected to the blades, and an electrical controller connected to the at least one conveyor drive motor and to the at least one actuator, the method comprising the steps of:

a) operating the electrical controller to operate the at least one conveyor drive motor and the at least one blade actuator in a controlled sequence to:

- i) sever the wire into two sections,
- ii) cut the sheathing at locations spaced from the two severed section ends, at least one section at a time, and
- iii) cause the pairs of endless belt conveyors to displace said two severed sections, at least one section at a time, so as to effect stripping of the sheathing from each said section adjacent to its severed end, at least one section

at a time.

57. The method of claim 56 wherein at least one conveyor drive motor is operated to drive at least one pair of said conveyors to position the wire for two or more of said blades to sever the wire.

58. The method of claim 56 wherein at least one conveyor drive motor is operated to drive the endless belt conveyor pairs, at least one pair at a time, to position said two sections axially, at least one section at a time, to enable two or more of said blades to cut the sheathing at said locations spaced from the two severed section ends, at least one section at a time.

59. The method of claim 56 including

- i) positioning and operating one of said endless belt conveyor pairs to move one of said severed wire sections axially, so that the distance from the blades to the

severed end of said one of the  
severed wire sections equals a  
predetermined sheathing strip  
length,

- ii) and, positioning and operating the  
other of said conveyor pairs to  
move the other of said severed wire  
sections axially, so that the  
distance from the blades to the  
severed end of said other of said  
severed wire sections equals a  
predetermined strip length.

60. The method of claim 56 including  
operating said conveyor pairs to drive the wire in a  
forward direction past the blades so that the wire can  
be severed into said two sections to thereafter be  
displaced to effect said stripping.

61. In apparatus, as defined in claim 46,  
the combination comprising:

d) first upper and lower assemblies for  
carrying and controllably driving said first upper and  
lower endless conveyors,

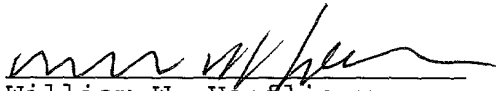
e) there being a frame including at least  
one guide supporting at least one of said first  
assemblies for guided movement toward and away from the  
other assembly,

f) and there being at least one spring for  
exerting yieldable force to urge at least one of said  
first conveyors toward the other and toward the wire.

R E M A R K S

Allowance is urged.

Respectfully submitted,



William W. Haefliger  
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WWH:ts

Docket 12,335

This application is a continuation of prior U.S. application serial number 09/494,461 filed January 31, 2000, which is a divisional of prior U.S. application serial number 09/320,096 filed May 26, 1999, now U.S. Patent 6,272,740, which is a continuation of prior U.S. application serial number 08/845,065 filed April 21, 1997, now U.S. Patent 5,937,511, which is a continuation of prior U.S. serial number 08/353,352 filed December 2, 1994, now U.S. Patent 5,664,324, which is a continuation in part of prior U.S. application serial number 08/022,981 filed February 25, 1993, now U.S. Patent 5,375,485, which is a continuation in part of prior U.S. application 07/857,972 filed March 26, 1992, now U.S. Patent 5,293,683, which is a divisional of prior U.S. application 07/765,986 filed September 26, 1991 now U.S. Patent 5,253,555 which is a continuation in part of prior U.S. application serial number 07/659,557 filed February 22, 1991, abandoned, which is a continuation in part of prior U.S. application serial number 07/611,057 filed November 9, 1990 now U.S. Patent 5,146,673 and a continuation in part of prior U.S. application serial number 08/148,568 filed November 8, 1993 now U.S. Patent 5,469,763, which is a continuation in part of prior U.S. application serial number 08/022,981 filed February 25, 1993 now U.S.



Patent 5,375,485, which is a continuation in part of prior U.S. application serial number 07/857,972 filed March 26, 1992 now U.S. Patent 5,293,683, which is a divisional of prior U.S. application serial number 07/765,986 filed September 26, 1991, now U.S. Patent 5,253,555, which is a continuation in part of prior U.S. serial number 07/659,557 filed February 22, 1991 now abandoned, which is a continuation in part of prior U.S. application serial number 07/611,057 filed November 9, 1990 now U.S. Patent 5,146,673.